

Amendments to the Claims

Claims 1-12 have been cancelled. Claims 13-36 have been added. No claims have been amended. The listing of claims will replace all prior versions, and listings, of claims in the application:

1. - 12. (Canceled)

13. (New) A robotic surgical tool for use in a robotic surgical system having a processor which directs movement of a tool holder, the tool comprising:

a probe having a proximal end and a distal end;

a surgical end effector disposed adjacent the distal end of the probe;

an interface disposed adjacent the proximal end of the probe, the interface comprising a portion of a drive system that is releasably coupleable with the tool holder;

circuitry mounted on the probe, the circuitry defining a signal for transmitting to the processor so as to indicate compatibility of the tool with the system; and

a sterile adapter releasably mountable to the tool holder, the adapter configured to couple the tool holder to the interface, wherein the circuitry transmits the signal to the processor of the robotic surgical system via the adapter.

14. (New) The robotic surgical tool of claim 13, wherein the signal comprises unique tool identifier data.

15. (New) The robotic surgical tool of claim 13, wherein the signal further indicates at least one of tool life and cumulative tool use by a measurement selected from the group consisting of calendar date, clock time, number of surgical procedures, number of times the tool has been coupled to the system, and number of end effector actuations.

16. (New) The robotic surgical tool of claim 13, wherein the probe comprises an elongate shaft suitable for distal insertion via a minimally invasive aperture to an internal surgical site of a patient body.

17. (New) The robotic surgical tool of claim 16, wherein the end effector is adapted for manipulating tissue, and further comprising a wrist joint coupling the end effector to the elongate shaft for varying an orientation of the end effector relative to the elongate shaft within the internal surgical site.

18. (New) The robotic surgical tool of claim 13, wherein the end effector defines a field of view, the probe comprising an image capture device.

19. (New) A robotic surgical tool for use in a robotic surgical system having a processor which directs movement of a tool holder, the tool comprising:

- a probe having a proximal end and a distal end;
- a surgical end effector disposed adjacent the distal end of the probe;
- an interface disposed adjacent the proximal end of the probe, the interface comprising a portion of a drive system that is releasably coupleable with driving motors of the robotic surgical system; and

- circuitry mounted on the probe, the circuitry defining a signal for transmitting to the processor so as to indicate compatibility of the tool with the system;

- wherein the probe comprises an elongate shaft suitable for distal insertion via a minimally invasive aperture to an internal surgical site of a patient body, and wherein the end effector is adapted for manipulating tissue, and further comprising a wrist joint coupling the end effector to the shaft for varying an orientation of the end effector within the internal surgical site.

20. (New) The robotic surgical tool of claim 19, wherein the signal comprises unique tool identifier data.

21. (New) The robotic surgical tool of claim 19, wherein the signal further indicates at least one of tool life and cumulative tool use by a measurement selected from the

group consisting of calendar date, clock time, number of surgical procedures, number of times the tool has been coupled to the system, and/or a number of end effector actuations.

22. (New) The robotic surgical tool of claim 19 wherein the signal further indicates wrist joint geometry to the processor.

23. (New) A robotic surgical tool for use in a robotic surgical system having a processor which directs movement of a tool holder, the tool comprising:

a probe having a proximal end and a distal end;

a surgical end effector disposed adjacent the distal end of the probe;

an interface disposed adjacent the proximal end of the probe, the interface comprising a portion of a drive system that is releasably coupleable with driving motors of the robotic surgical system; and

circuitry mounted on the probe, the circuitry defining a signal for transmitting to the processor so as to indicate compatibility of the tool with the system;

wherein the end effector defines a field of view, the probe comprising an image capture device.

24. (New) The robotic surgical tool of claim 23, wherein the signal comprises unique tool identifier data.

25. (New) The robotic surgical tool of claim 23, wherein the probe comprises an elongate shaft suitable for distal insertion via a minimally invasive aperture to an internal surgical site of a patient body.

26. (New) The robotic surgical tool of claim 23, wherein the signal further indicates at least one of tool life and cumulative tool use by a measurement selected from the group consisting of calendar date, clock time, number of surgical procedures, and/or a number of times the tool has been coupled to the system.

27. (New) A robotic surgical tool for use in a robotic surgical system having a processor which directs movement of a tool holder, the tool comprising:

a probe having a proximal end and a distal end;

a surgical end effector disposed adjacent the distal end of the probe;

an interface disposed adjacent the proximal end of the probe, the interface releasably coupleable with the tool holder;

circuitry mounted on the probe, the circuitry transmitting a signal via the interface to the processor so as to indicate a tool-type of the tool; and

at least one joint disposed between the interface and end effector, the joint defining a joint axis geometry, and wherein the signal indicates the joint geometry of the tool to the processor.

28. (New) The robotic surgical tool of claim 27, wherein the signal comprises unique tool identifier data.

29. (New) The robotic surgical tool of claim 27, wherein the signal further indicates at least one of tool life and cumulative tool use by a measurement selected from the group consisting of calendar date, clock time, number of surgical procedures, number of times the tool has been coupled to the system, and number of end effector actuations.

30. (New) The robotic surgical tool of claim 27, wherein the probe comprises an elongate shaft suitable for distal insertion via a minimally invasive aperture to an internal surgical site of a patient body.

31. (New) A robotic surgical tool for use in a robotic surgical system having a processor which directs movement of a tool holder, the tool comprising:

a probe having a proximal end and a distal end;

a surgical end effector disposed adjacent the distal end of the probe;

an interface disposed adjacent the proximal end of the probe, the interface releasably coupleable with the tool holder;

circuitry mounted on the probe, the circuitry transmitting a signal via the interface to the processor so as to indicate a tool-type of the tool; and

wherein the end effector has a strength, and wherein the signal indicates the strength of the end effector to the processor.

32. (New) The robotic surgical tool of claim 31, wherein the signal comprises unique tool identifier data.

33. (New) The robotic surgical tool of claim 31, wherein the signal further indicates at least one of tool life and cumulative tool use by a measurement selected from the group consisting of calendar date, clock time, number of surgical procedures, number of times the tool has been coupled to the system, and number of end effector actuations.

34. (New) The robotic surgical tool of claim 31, wherein the probe comprises an elongate shaft suitable for distal insertion via a minimally invasive aperture to an internal surgical site of a patient body.

35. (New) The robotic surgical tool of claim 34, wherein the end effector is adapted for manipulating tissue, and further comprising a wrist joint coupling the end effector to the shaft for varying an orientation of the end effector within the internal surgical site.

36. (New) A robotic surgical tool for use in a robotic surgical system having a processor which directs movement of a tool holder, the tool comprising:

a probe having a proximal end and a distal end;

a surgical end effector disposed adjacent the distal end of the probe;

an interface disposed adjacent the proximal end of the probe, the interface comprising a portion of a drive system that is releasably coupleable with driving motors of the robotic surgical system the tool holder; and

circuitry mounted on the probe, the circuitry transmitting a signal via the interface to the processor that indicates tool calibration offsets of the tool.